

WE CLAIM:

1. A well assembly comprising:

a downhole pump assembly, the pump assembly having an intake and a discharge outlet;

a capsule enclosing the pump assembly for isolating the pump assembly from a well fluid;

a flow control device for selectively communicating the well fluid with the pump assembly; and

a conduit within the capsule having open upper and lower ends and extending sealingly through the capsule for accessing a portion of well below the capsule.
2. The well assembly according to claim 1, further comprising a string of tubing supporting the pump assembly through which the well fluid flows after discharge by the pump.
3. The well assembly according to claim 2, wherein the pump assembly is offset from an axis of the tubing.
4. The well assembly according to claim 2, wherein the upper end of the conduit is coaxially aligned with the string of tubing.
5. The well assembly according to claim 2, wherein the discharge outlet communicates with the tubing.

6. The well assembly according to claim 5, further comprising a discharge valve at the discharge outlet of the pump for blocking the well fluid in the tubing from flowing back into the discharge outlet.
7. The well assembly according to claim 1, wherein the flow control device selectively communicates and blocks the well fluid from the intake of the pump.
8. The well assembly according to claim 1, wherein the conduit runs parallel to the pump assembly.
9. The well assembly according to claim 1, wherein the flow control device comprises a valve.
10. The well assembly according to claim 1, wherein the flow control device is located within the capsule.
11. The well assembly according to claim 1, wherein an upper end of the pump assembly is located below an upper end of the capsule and a lower end of the pump assembly is located above a lower end of the capsule.
12. A well assembly comprising:
 - a string of tubing for installation in a well;
 - a capsule supported by the string of tubing;

a pump assembly inside the capsule, the pump assembly having a lower intake and an upper discharge outlet that communicates with the tubing;

an opening at a lower end of the capsule that admits a well fluid into an interior of the capsule;

a valve at the opening to selectively block the well fluid from the interior of the capsule;
and

a conduit within the capsule running parallel to the pump assembly, the conduit having an open lower end extending sealingly through the lower end of the capsule for accessing a portion of the well below the capsule.

13. The well assembly according to claim 12, wherein the conduit is in axial alignment with the tubing.

14. The well assembly according to claim 12, further comprising a manifold that communicates an upper end of the conduit and the upper discharge outlet of the pump assembly with the tubing.

15. A well assembly comprising:

a downhole pump assembly supported by a string of tubing in a well, the pump assembly having a lower intake and an upper discharge outlet that communicates with the tubing;

a capsule enclosing the pump assembly for isolating the pump assembly from well fluid, the capsule having an upper end suspended on the tubing and a lower aperture;

a conduit within the capsule running parallel to the pump assembly, the conduit having an upper end that is in axial alignment with the tubing, and an open lower end extending sealingly through the lower aperture of the capsule for receiving the well fluid;

a manifold that communicates the upper end of the conduit and the upper discharge outlet of the pump assembly with the tubing;

a port in the conduit within the capsule for communicating the well fluid with the pump assembly; and

a port valve that selectively opens and closes the port without affecting communication between the conduit and the tubing.

16. The well assembly according to claim 15, further comprising a check valve at the upper discharge outlet of the pump assembly for allowing upward flow but preventing downward flow.

17. The well assembly according to claim 15, further comprising a retrievable plug in the conduit above the port.

18. The well assembly according to claim 15, wherein the port valve comprises a sliding sleeve.

19. The well assembly according to claim 15, wherein the manifold comprises a tubular member having a chamber, the upper discharge outlet of the pump assembly, the upper end of the conduit, and a lower end of the tubing being in communication with the chamber.

20. The well assembly according to claim 15, wherein the port valve comprises a sliding sleeve that is actuated remotely at a surface of a well by hydraulic fluid pressure.
21. The well assembly according to claim 15, wherein the port valve is biased normally open.
22. A method of pumping fluid from a well comprising:
supporting a downhole pump assembly with a string of tubing, the pump assembly having an intake and a discharge outlet that communicates with the tubing;
enclosing the pump assembly in a capsule;
selectively communicating a well fluid with an interior of the capsule and the pump assembly;
operating the pump assembly so as to pump the well fluid up the tubing; then, for maintenance,
shutting off the pump assembly;
blocking the well fluid from the interior of the capsule; and
applying pressure to the well fluid surrounding the capsule, the capsule isolating the pump assembly from the pressure.
23. The method according to claim 22, further comprising providing a conduit through the capsule; and
lowering a tool through the tubing, the conduit, and into the well below the capsule.
24. The method according to claim 22, wherein the pressure is applied to the well fluid by pumping from the surface down the tubing.